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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,755	07/20/2005	Taro Suzuki	330-302	1935
23117 7590 05/07/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
LOEWE, ROBERT S				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
05/07/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/538,755

Applicant(s)

SUZUKI ET AL.

Examiner

ROBERT LOEWE

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,7-9 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's arguments/remarks, filed on 3/18/08, have been fully acknowledged.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, claim 16 is confusing. Applicant's initial attempt to modify the claim to clarify the language therein has not provided any clarification to the confusing language presented therein. The phrase "at a temperature that is higher than the temperature which is lower than a decomposition temperature" makes it difficult to determine exactly what temperature(s) are used in this preliminary calcining step. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(c), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikubo et al. (JP-2000-204168), in view of Okamoto et al. (JP-200280598). For convenience, the English language machine-translated version of both JP documents will be relied upon.

Claim 5: Ishikubo et al. teaches a method for producing polyorganosiloxane particles, which comprises hydrolyzing and condensing methyltrimethoxysilane in the presence of a basic catalyst (ammonia) to form seed polyorganosiloxane particles, followed by mixing said seed polyorganosiloxane particles with a particle-diameter-growing aqueous solution containing methyltrimethoxysilane to grow said seed particles (paragraphs 0074-0077).

Ishikubo et al. does not teach that the seed particles are measured for diameters continuously or at intervals of a constant time period and the reaction is terminated when an intended particle diameter is reached. However, Official Notice is taken that it is well-known to monitor reaction variables in a continuous or discontinuous manner (e.g., in fixed time intervals. It is also well known to terminate such reactions when the desired reaction variable is met. For example, reaction parameters such as temperature, pressure, pH, or IR characteristics can be monitored in real-time. It follows that a person having ordinary skill in the art would know when to stop a reaction when a desired reaction parameter has been met.

Ishikubo et al. also does not teach the method for monitoring the particle size and particle size distribution according to the method of measurement of instant claim 5, specifically that part of the reaction solution is sampled and brought into contact with a protective-colloid-forming agent to form a protective colloid on the particles in the reaction solution, and then the measurement is made by a Coulter method. However, Okamoto et al. does teach measuring the particles size and particle size distribution according to the method of instant claim 5 (paragraphs 0028-0029). Ishikubo et al. and Okamoto et al. are combinable because they are from the same field of endeavor, namely, the preparation of organopolysiloxane particles. At the time of the invention, a person having ordinary skill in the art would have found it obvious to measure the particle diameters of the polyorganosiloxane particles following the procedure as taught by Okamoto et al. into the procedure for preparing polyorganosiloxane particles as taught by Ishikubo et al. and would have been motivated to do so because Okamoto et al. teaches that employing a protective colloid-forming agent allows for the seed particles to maintain their size during the Coulter counter measurement (paragraph 0028).

Claim 7: Ishikubo et al. implicitly teaches that the polyorganosiloxane particles are polymethylsilsesquioxane particles (paragraphs 0074-0077). Since Ishikubo et al. teaches the same process of instant claim 5, it follows that the resultant composition of the polyorganosiloxane particles be the same.

Claim 8: Ishikubo et al. teaches that the addition rate of the particle-diameter-growing aqueous solution to the seed-particles-containing solution is 0.01 mL/minute per milliliter of seed-particles-containing solution (paragraph 0077).

Claim 9: Ishikubo et al. teaches that the polyorganosiloxane particles have a particle diameter of 1 to 30 microns and a coefficient of variation of 3% or less (paragraph 0016 and Table 1, entries 1-5).

Response to Arguments

Applicant's arguments, filed 3/18/08, with respect to claims 1-4 and 10-15 have been fully considered and are persuasive. The prior art rejections of claims 1-4 and 10-15 have been withdrawn.

Allowable Subject Matter

Claims 1-4 are allowed. Specifically, Applicant's have pointed out that Ishikubo et al. does not explicitly teach that the amount of basic catalyst is between 0.7 to 6.5 mass ppm, as required by instant claim 1. The Examiner agrees with Applicant's estimated amount of ammonium hydroxide (basic) catalyst of Ishikubo et al. to be 50.5 mass ppm (as taught in example 1 of Ishikubo et al.), which falls outside the claimed range. Further, Applicant's have demonstrated criticality of this claimed range as evidenced by comparative example 1 (ammonia content of 0.68 ppm, just below the range of instant claim 1) and comparative example 2 (ammonia content of 6.8 ppm, just above the range of instant claim 1) of the instant specification. In comparative examples 1 and 2, the resultant seed-particles had a coefficient of variation in excess of 3% and an average particle size of about 2.2 microns. Seed-particles which are prepared using a basic catalyst content which satisfies the range of instant claim 1 (examples 1, 3, and 5 of the instant specification) afford polyorganosiloxane particles having

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sizes of greater than 5 microns (up to 11 microns) and display a coefficient of variation of less than 3%. Last, Ishikubo et al. does not teach the amount of basic catalyst with any specificity as required by instant claim 1 (Ishikubo et al. only teaches that the amount of basic catalyst is such that the pH be between 7-13, paragraphs 0035-0036). Such a teaching does not anticipate, nor render obvious the narrowly claimed range of instant claim 1. Ishikubo et al. is believed to be the closest prior art regarding instant claim 1.

Claims 10-15 are allowed. Specifically, Applicant's have pointed out that Ishikubo et al. does not explicitly teach that the surfactant is added during the preparation of the seed-particles. Instant claim 10 requires that the surfactant be added **after** the preparation of the seed-particles (i.e., the surfactant is added during the growth of the seed particles). There is nothing taught or suggested by Ishikubo et al. which would anticipate or render obvious, adding the surfactant at the same stage of the reaction as required by instant claim 10.

Claim 16 would be allowable if the 112 rejection (vide supra) is overcome. The Examiner has proposed that instant claim 16 be amended as follows:

--A method for producing silica particles, which comprises preliminarily calcining the polyorganosiloxane particles obtained by the method of claim 1 at a temperature which is lower than the decomposition temperature of the organic groups of the polyorganosiloxane particles, and then calcining the polyorganosiloxane particles at or above the decomposition temperature of the organic groups of the polyorganosiloxane particles.--

Such an amendment would simplify instant claim 16, removing the confusion associated with the awkward language as is currently presented.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Loewe whose telephone number is (571) 270-3298. The examiner can normally be reached on Monday through Friday from 5:30 AM to 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. L./

Examiner, Art Unit 1796

1-May-08

/Randy Gulakowski/

Supervisory Patent Examiner, Art Unit 1796